CLAIM AMENDMENTS

1. (Original) A switched DC rotating electrical machine comprising a stator, a rotor and switching means, one of said stator and rotor comprising an excitation winding having a first and a second input, the excitation winding being adapted when energized to cause magnetization of an even plurality of poles associated with said excitation winding, the switching means being, in use, associated with a DC voltage source, the DC voltage source providing a low voltage output, a high voltage output and an intermediate voltage output having an electrical potential intermediate the electrical potentials of the high voltage output and the low voltage output, wherein in use the intermediate voltage output is continuously connected to the first input and the second input is switched in a cyclic operation by said switching means between connection with the high voltage output and the low voltage output and wherein the cycle of the cyclic operation also includes segments of time when the second input is disconnected from either of said low voltage or high voltage outputs.

2. (Cancelled)

3. (Original) An electrical machine as claimed at claim 1 wherein the excitation winding is configured to energize adjacent poles associated with said excitation winding with opposite magnetic polarity.

4. (Currently amended) An electrical machine as claimed at ~~any one of the previous claims~~ claim 1 wherein the voltage differential between the low voltage output and the intermediate voltage output is substantially the same as the voltage differential between the intermediate voltage output and the high voltage output.

5. (Currently amended) An electrical machine as claimed at ~~any one of the previous claims~~ claim 1 wherein the other of said stator and rotor not comprising said excitation winding comprises an even plurality of poles.

6. (Currently amended) An electrical machine as claimed at ~~any one of the previous claims~~ claim 1 wherein the switching of the switching means is synchronised with the rotation of the rotor.

7. (Original) An electrical machine as claimed at claim 6 wherein switching means comprises sensing means adapted to cause switching of the switching means according to the rotational position of the rotor.

8. (Original) An electrical machine as claimed at claim 7 wherein the sensing means comprises a photoelectric sensor.

9. (Currently amended) An electrical machine as claimed at claim 7 ~~or claim 8~~ wherein a timing wheel is associated with the sensing means to provide a reference for the rotational position of the rotor.

10. (Currently amended) An electrical machine as claimed at ~~any one of claims 6 to 9~~ claim 6 wherein the second input is switched to the high voltage output or to the low voltage output when a pole of the rotor is positioned in opposed relationship to a pole of the stator.

11. (Currently amended) An electrical machine as claimed at ~~any one of claims 6 to 10~~ claim 6 wherein the second input is switched to a disconnected state substantially at a predetermined moment selected to minimize transient currents.

12. (Original) An electrical machine as claimed at claim 11 wherein the second input is disconnected from the DC voltage source for a substantial proportion of the cyclic period.

13. (Original) A switched DC rotating electrical machine comprising a stator, a rotor and switching means, the stator being configured with a stator set of poles comprising a plurality of magnetic poles and the rotor being configured with a rotor set of poles comprising a plurality of magnetic poles, a one set of said stator set and rotor set being configured to provide a magnetic field and the other set of said stator set and rotor set being configured with an excitation coil associated with each pole of said other set, said coils being adapted to be excited by a DC voltage source by means of a first input and a second input to thereby induce a magnetic field in association with each pole, said coils being configured to cause said magnetic fields of adjacent poles to be magnetized to opposite polarity, connection to said DC voltage source being controlled by said switching means whereby in use, by the rotation of the rotor with respect to the stator, the magnetic field of the one set is adapted to move relative to the poles of the other set, the DC voltage source having a low voltage output, a high voltage output and an intermediate voltage output having an electrical potential intermediate the electrical potentials of the high voltage output and the low voltage output, the intermediate voltage output being in use, continuously connected to the first input and the second input being adapted to be cyclically switched by said switching means between said low voltage output and said high voltage output and wherein the cycle of the cyclic operation also includes segments of time when the second input is disconnected from either of said low voltage or high voltage outputs.

14. (Original) A switched DC rotating electrical machine comprising a stator, a rotor and switching means, one of said stator and rotor comprising an excitation winding having a first and a second input, the excitation winding being adapted when energized to cause magnetization of a first even plurality of poles associated with said excitation winding and being configured to energize poles adjacent said associated poles with opposite magnetic polarity, the other of said stator and rotor comprising a second even plurality of poles, the switching means being associated with a DC voltage source having a low voltage output, a high voltage output and an intermediate voltage output having an electrical potential intermediate the electrical potentials of the high voltage output and the low voltage output, wherein, in use, the intermediate voltage output is continuously connected to the first input of said excitation winding and the second input is switched in said cyclic operation by said switching means between connection with the high voltage output and the low voltage output, the switching means being configured to cause switching of the excitation winding to an energized state when a pole of the rotor is positioned in opposed relationship to a pole of the stator and wherein the cycle of the cyclic operation also includes segments of time when the second input is switched to a state disconnected from the DC voltage source.

15. (Cancelled)

16. (Currently amended) An electrical machine as claimed at ~~claim 13~~ or claim14 wherein the second input is switched to said disconnected state substantially at a predetermined moment selected to minimize transient currents.

17. (Original) An electrical machine as claimed at claim 16 wherein the switching of the switching means is synchronised with the rotation of the rotor.

18. (Currently amended) An electrical machine as claimed at ~~any~~ claim 17 wherein switching means comprises sensing means adapted to cause switching of the switching means according to the rotational position of the rotor.

19. (Original) An electrical machine as claimed at claim 18 wherein the sensing means comprises a photoelectric sensor.

20. (Currently amended) An electrical machine as claimed at claim 18 ~~or claim 19~~ wherein a timing wheel is associated with the sensing means to provide a reference for the rotational position of the rotor.

21. (Cancelled)

22. (Currently amended) An electrical machine as claimed at ~~any one of the previous claims~~ claim 14 wherein the electrical machine is an electric motor.

23. (Currently amended) An electrical machine as claimed at ~~any one of claims 1 to 21~~ claim 14 wherein the electrical machine is an electric generator.

24. (Currently amended) An electrical machine as claimed at ~~any one of the previous claims~~ claim 14 wherein the excitation winding is associated with the stator.

25. (Original) An electrical machine as claimed at claim 24 wherein the rotor comprises a winding energized from a DC power supply via slip rings.

26. (Original) An electrical machine as claimed at claim 24 wherein the rotor comprises a permanent magnet.